

### REMARKS

The pending claims have been amended to make it clear that the printing ink of the invention is a security document printing ink. As the opening paragraphs of this application and [0003] - [0015] of Veya make clear, such security document printing ink have a special set of properties which are not required in other types of intaglio inks.

In addition to the rheology and ease of removal of surplus ink requirements, intaglio security document printing inks must meet the following requirements: (1) they must remain on the engraved cylinder until the moment of printing and then must transfer readily and in a consistent manner to the substrate to be printed, (2) they must have good film-forming properties and the cured inks must be sufficiently flexible that they remain intact even when the printed matter (e.g. banknotes) is subject to abuse, (3) once the substrate has been printed, the ink must not transfer back to other surfaces with which it may come into contact, especially other printed matter, (4) the cured ink must have excellent chemical and mechanical resistance so as to withstand the many diverse materials and conditions to which banknotes may be subject, (5) it must be safe for handling by all members of the public, including the very young, (6) it must be easily cleaned from the surface of a wiping cylinder, (7) it must have non-offsetting properties, (8) it must have the outstanding chemical and mechanical resistance required by international and US printing authorities, and (9) it must have acceptable toxicologic and environmental properties.

Not surprisingly, it is difficult to meet all of these requirements simultaneously, and inks appropriate for other types of intaglio printing are inappropriate for intaglio

security document printing. For instance, as Veya points out, rotogravure processes “rely on a different type of ink.” [0003].

Claims 1-17 and 22-24 were rejected under 35 USC § 102 over Schmidt. These rejections are respectfully traversed.

One basis for the rejections is that Schmidt relates to intaglio inks and printing. It should be appreciated that the type of intaglio ink and printing in this reference is rotogravure. Security document inks and rotogravure type inks are distinct types of inks even though both can be said to be a form of intaglio ink, and likewise, security document printing and rotogravure printing are distinct even though both can be said to be a form of intaglio printing. This is the point that applicants were trying to make in previously, but failed to do so in a sufficiently clear manner. The point is, as noted above, confirmed in Veya.

While Schmidt teaches the rotogravure type of intaglio ink and printing, it does not teach the security document type of intaglio ink and printing. Schmidt’s ink contains a vinyl ether as an essential component [0033], and additionally contains an actinic radiation-curable binder agent system, radical photoinitiator, and optionally, coloring agents and additives [0022]. Each of these components can be selected from a variety of materials. For example, Schmidt suggests the photoinitiator can be a thioxanthone which the present application shows both fluoresces and has a very poor cure when used in a security document intaglio ink formulation.

The Office Action admits that Schmidt does not have any teaching about non-fluorescing but asserts both the individual components and the formulated ink do not

fluoresce, and specifically refers to Ex. 4 ink as not visibly fluorescing under UV light. No factual basis from which this conclusion could be drawn is identified. Since there is nothing in Schmidt from which that assertion could be based, it is clearly impermissible speculation. Even assuming that a component does not fluoresce when it is not a part of a larger formulation, it is not permissible to conclude a formulated ink containing that component does not fluoresce. An example of this is the fact that the Declaration of record establishes that the photoinitiator of Schmidt's Example 4 is an equal mixture of two photoinitiators, one of which fluoresces, and the formulated ink fluoresces.

The Office Action takes the position that Schmidt teaches all of the claimed reagents and therefore a composition formed from them would inherently be a security document printing ink which does not fluoresce. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990) (emphasis in original). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). It is respectfully submitted that the asserted inherency here is untenable because not only is there no basis in fact and/or technical reasoning to support the contention that the allegedly inherent characteristic is present in all of the reagents and in the formulated ink but the Declaration establishes it is in fact not necessarily present.

In the Response to Arguments, the Declaration is dismissed because a skilled person has the capability to modify the ink so that it does not fluoresce. But that is an

argument for obviousness, while the rejection is based on novelty. Even as to obviousness, it is an invalid contention. See, e.g., *Ex parte Levengood*, 28 USPQ 1300, 1302 (BPAI 1993).

The Response to Arguments also asserts novelty is absent when a reference names a claimed species no matter how many other species are named, citing MPEP 2131.02. However, the very first sentence under that heading points out that this proposition is not universal: "A genus does not always anticipate a claim to a species within the genus." The Section references *In re Sivaramakrishnan*, 213 USPQ 441 (CCPA 1982) as a situation where composition claims to polycarbonate containing cadmium laurate as an additive was anticipated by a reference specifically naming cadmium laurate as an additive in polycarbonate resin. As the Court commented, "one of ordinary skill...would not have had to choose judiciously from a genus of possible combinations of resin and salt to obtain the very subject matter to which appellant's composition per se claims are directed." *Id.* at 442 (emphasis added). Anticipation is not present when it is necessary, as it is here, to pick, choose and combine various portions of a reference when reading a claim on that reference. *In re Arkley*, 172 USPQ 524, 526 (CCPA 1972); Accord *Ex parte Beuther*, 71 USPQ2d 1313 (BPAI 2003)(unpublished). Here, a judicious selection is necessary, making obviousness the relevant consideration. The lack of fluorescence is not merely an unappreciated property of an old composition, but it is at best, a property resulting from a judicious selection. Since no reason to make the appropriate selections exists, making a judicious selection is not only novel, but it is not obvious. Nothing in Schmidt suggests that acylphosphine oxides may be used as an initiator in security document printing inks without causing the resulting inks to fluoresce in the visible region under UV light. Nothing permits the skilled person to predict this surprising and unexpected result.

It is respectfully submitted that the prospective Office position that the application has an inadequate disclosure of how to obtain the desired properties should not be adopted. The application makes it clear that security document inks are known. Those skilled in this art know how to make an intaglio ink containing a photoinitiator, and Veya is one example of this. As the Examiner is aware, a specification preferably omits what is known to people skilled in the art. The application makes it clear that using acylphosphine oxides the photoinitiator will not cause the security document ink to fluoresce. Therefore, the application does disclose how to obtain the desired properties in a security document ink.

In light of all of the foregoing considerations, it is respectfully submitted that no anticipation (or obviousness) rejection is tenable.

Claims 18-19 were rejected under 35 USC § 103 over Schmidt in view of Veya and claim 20 over Schmidt in view of Veya and Ghioghiu. Both rejections are respectfully traversed.

The foregoing discussion is applicable here. Veya has been cited in this rejection only for the substrate being paper or the document produced being a security document while Ghioghiu has been cited only for the document being a banknote. They are thus not asserted to cure the basic deficiencies in Schmidt, and in fact, they do not do so. Nothing in Schmidt suggests that acylphosphine oxides may be used as an initiator in security document printing inks without causing the resulting inks to fluoresce in the visible region under UV light. Both Veya and Ghioghiu fail to teach or suggest the use of a phosphine oxide as a photoinitiator in an intaglio security document printing ink. Accordingly, this rejection is also untenable and should not be repeated.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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